

Amendments to the Drawings

Please replace the existing drawings with the attached replacement drawing sheets.

Please insert, after the replacement drawing sheets, the attached new drawing sheet that includes new FIG. 14.

Remarks

Status of the Application

Claims 1-15, 17-24, 27-35, and 37-42 are pending with the entry of this amendment.

The Amendments

The amendments to the specification and drawings do not add new matter to the application as originally filed.

The Objections to the Drawings

The drawings are objected to under 37 CFR § 1.83(a), for purportedly not showing every feature of the invention specified in the claims.

The first drawing objection relates to claims 7 and 8, and asserts that the drawings are deficient for not showing alignment members having a curved surface as recited in claim 7 or a locating pin as recited in claim 8. Applicants have submitted a new figure, Figure 14, which shows the use of pins as alignment members (reference numerals 25 and 30). The pins have curved surfaces as specified in claim 7. Such alignment members find support in the specification, which states that alignment members can “have a curved surface that is in contact with a properly positioned object. The use of a curved surface minimizes the effect of, for example, roughness of the object surface that contacts the alignment member” (paragraph 00040).

The second drawing objection pertains to claims 29-34. Claim 29 is directed to automated systems for performing high throughput assays or reactions in microtiter plates in which the automated systems have a) a positioning device, and b) an additional component for performing high-throughput assays. Claims 30-34 recite that the additional components are a robotic device for placing microtiter plates (claims 30 and 33), a liquid dispenser (claims 31 and 34), a retaining device (claim 32). The Supreme Court long ago stated that an applicant “may begin at the point where his invention begins, and describe what he has made that is new, and what it replaces of the old. That which is common and well known is as if it were written out in

the patent and delineated in the drawings.” *Webster Loom Co. v. Higgins*, 105 US 580, 586 (1881). Robotic devices for handling microtiter plates were common and well known to those of ordinary skill in the art at the time of Applicants’ priority date, as were liquid dispensers. These conventional features, standing apart from the positioning device invented by Applicants, are not part of Applicants’ invention. Thus, these well known, common components need not even be described in the specification, let alone illustrated in the drawings.

Because the current drawings meet the requirements of Rules 1.81 and 1.83, Applicants respectfully submit that the objections to the drawings are improper and should be withdrawn.

The 35 USC § 112, Second Paragraph Rejections

Claims 1-15, 17-24, 27-35 and 37-42 stand rejected under 35 USC § 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention. In particular, the Office Action alleges that the structure of the microtiter plate is not well defined, and that there is some question as to what constitutes an inner and an outer well. Applicants respectfully traverse this ground of rejection, as the instant specification and drawings provide a precise explanation of what constitutes an inner wall. The specification states that “[a]n inner wall **88** of a microtiter plate is shown in, for example, Figure 4” (paragraph 00013), and that “[m]icrotiter plates also generally have an inner wall **88** and an outer wall **85**, the outer wall generally defining the peripheral shape of the plate, and the *inner wall generally defining a well area 92 on the plate*” (paragraph 00019, emphasis added). The specification provides further definition at page 9:

“The microtiter plate **82** has a bottom surface **92** below the well area on the plate’s bottom side. The bottom surface **92** is separated from the outer wall **84** by a space **94**. The space **94** is bounded by a surface of the outer wall **84** and by *an inner wall **88** at the edge of the bottom surface **92***. Although there may be some lateral supports **93** in the space **94**, the space **94** is generally open between the inner wall **88** and an inner surface of the outer wall **84**.” (paragraph 00041, emphasis added)

Examination of Figures 4 and 5, in combination with the descriptions in the specification, leave no uncertainty as to those surfaces of a microtiter plate that are considered "inner walls" (see the surface indicated by reference numeral 88 on the two figures). Applicants respectfully submit that there is no ambiguity or lack of definition of what constitutes an "inner wall," and request that this ground of rejection be withdrawn.

The 35 USC § 102 Rejections

Claims 1-4 and 12-15 and 17-18 stand rejected under 35 USC § 102(e) as allegedly being anticipated by Bevirt (US 6,063,579). Independent claim 1 is directed to positioning devices that have an alignment member that is "in contact with an inner wall of the microtiter plate." The examiner has maintained this rejection because of the alleged uncertainty as to what is an "inner wall" of a microtiter plate." According to the office action, "a definition of an inner wall should include any wall or structure that defines the well section of the microtiter plate. Thus when the alignment structure of Bevirt contacts a wall of the wells as shown in the figures [indicated by, e.g., reference numeral 78 in Figure 5 of Bevirt as reproduced below], this is within the scope of in contact with an inner wall." Applicants respectfully traverse this rejection because, as explained above, the instant specification and drawings clearly define an "inner wall," and under that definition the alignment structure 78 in Bevirt does not contact an inner wall of the microtiter plate. In contrast, the alignment structure of Bevirt contacts the microtiter plate between wells. Since Bevirt does not describe each element of claim 1, this ground of rejection should be withdrawn for each of rejected claims 1-2 and 12-13.

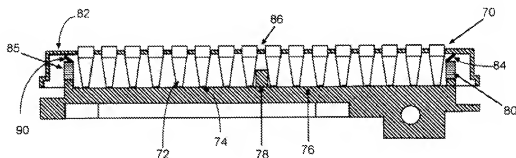


Fig. 5

Claim 14 is directed to a retaining device for retaining a microtiter plate in a desired position on a support, wherein the retaining device comprises a vacuum plate and a microtiter plate that is placed on the vacuum plate, wherein the vacuum plate comprises: a) a lip surface that is in contact with an outer wall of the microtiter plate b) that is recessed relative to the lip surface and contacts an outer wall of a microtiter plate when the plate is placed in a desired position on the support, and c) a vacuum groove that is disposed between the lip surface and the interior surface. The interior surface is recessed relative to the lip surface. Outer walls of microtiter plates are shown, for example, as reference numeral **84** in Figures 5 and 6 and described in the specification at, for example, paragraph 00019: "Microtiter plates also generally have an inner wall **88** and an outer wall **85**, *the outer wall generally defining the peripheral shape of the plate*, and the inner wall generally defining a well area **92** on the plate."

The device described in Bevirt does not have each of the elements discussed above. As shown in Figure 5 of Bevirt (reproduced above), no structure of the positioner is in contact with the outer wall, i.e., a wall that defines the peripheral shape of the plate, of the microtiter plate. Nor does the Bevirt device have a vacuum groove that is disposed between the lip surface and the interior surface. Therefore, claim 14 as previously amended is not anticipated by Bevirt. Nor are claims 15, 17 or 18, each of which depends from claim 14.

The 35 USC § 103(a) Rejections

Claims 1-15, 17-24, 27-35 and 37-42 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Burton (WO 99/04228) or Modlin (US Patent No. 6,071,748) in view of Cathcart (US 5,443,791), Markin (US 5,417,922) and Bevirt. As the Burton and Modlin references have equivalent disclosures, and to be consistent with the Office Action, Applicants' remarks below refer to the Modlin patent. Applicants respectfully traverse these rejections.

Bevirt, as discussed above, does not describe a positioning device in which an alignment member is in contact with an inner wall of a microtiter plate, as is required by independent claims 1, 21, 29 and 35. Nor does either of Burton or Modlin describe such a device. In contrast, the positioners described in those two references have alignment members (shown in Fig. 22a-c of Modlin as 604a,b and 606a,b) that contact the outer edges of the microtiter plate.

Claims 39-40 and 42 require that an alignment surface of an inner wall of a microtiter plate is placed adjacent with an alignment member. None of the cited references describe such a method, as they do not describe any device in which an alignment member is capable of being placed adjacent to an inner wall of a microtiter plate. Therefore, these claims are not *prima facie* obvious over the cited combination of references.

Claims 14, 15, 17-20, and 32-34 each recite, or depend from a claim that recites, that the device comprises a vacuum plate that comprises a microtiter plate and a) a lip surface that is in contact with an outer wall of the microtiter plate; b) an interior surface that is recessed relative to the lip surface, and c) a vacuum groove disposed between the interior surface and the lip surface, wherein when a vacuum is applied, the vacuum plate holds the microtiter plate in the desired position. Neither Burton nor Modlin describe a device that has such a structure. The Bevirt, Markin and Cathcart references likewise fail to teach a device having the claimed structure. Consequently, these claims are not *prima facie* obvious over the cited references.

Conclusion

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for examination. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned attorney at 858-812-1547.

Respectfully submitted,

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